



FEATURE

Self-authenticating Handwriting: Can you recognize your own handwriting?

by *Jacqueline A. Joseph,*
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The only double-board certified forensic document examiner in the Pacific Northwest, Jacqueline began her FDE career in 1992 alongside her mentor and collaborator, the late Marcel Matley. Prior to that, she earned a BA degree in secondary education from the University of Arizona at Tucson and, most recently, received a graduate certificate in business communications from Harvard Extension School.

Jacqueline's handwriting specialties include author identification (WRITER IDENTIFICATION: finding out who wrote suspicious documents) and document decipherment (CONTENT CLARITY: finding out what the illegible document says).

In 2020 and 2021, she was selected by the American Academy of Forensic Sciences (AAFS) to present poster sessions. Over the years, she has presented 17 poster sessions at conferences, including the 2011 Annual World Congress of Forensics in Chongqing, China.

Worldwide, Jacqueline is one of ten document examiners certified by the Board of Forensic Document Examiners (www.bfde.org). As a certifying board, the BFDE maintains accreditation by the Forensic Specialties Accreditation Board (FSAB: www.thefsab.org) which recognizes certification programs offered by its ten accredited forensic boards including BFDE.

Preface

I designed and conducted a small-population study for the purpose of securing data on the success of the participants' ability to identify their own handwriting and/or handwritten numerals.

Over the course of my career, I have encountered client-attorneys who became confounded when hearing their client's statement, "That's not my handwriting," only to have this statement refuted by my fact-based, forensic expert opinion showing conflicting proof regarding authorship.

The client's statement could be attributed to eyewitness error (intentional deceit aside), form blindness, memory lapse, or digital image distortion rendering the client unable to accurately recognize their own writing when asked to self-authenticate the disputed words and/or numbers.

Methodology for this study

I collected handwriting from my 25 fellow yoga students, ranging in age from 19 to 62. We were attending a summertime week-long yoga retreat. The venue was nestled in a remote location along the Rogue River in southern Oregon. Having a same-member audience for a week provided the staging of several days between the act of writing and the return-to-the-page.

On the first day of our retreat, I enrolled everyone by asking them to participate in a handwriting study using their own natural handwriting. I intentionally did not disclose my purpose for the study. After everyone agreed, they were each given six blank 3"x5" index cards and a #2 pencil. On each index card, the participants were told to write their initials as well as one of the following phrases/numbers:

Merry Christmas
Washington
April 15, 2007
September
7 8 9 10
1948

I chose these somewhat familiar prompts with the hope of distracting the writer from the act of writing. "As a writer becomes graphically mature, the writer concentrates on transmitting thoughts and ideas and not on the formation of learned letter forms."⁸

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Continued from the previous page.

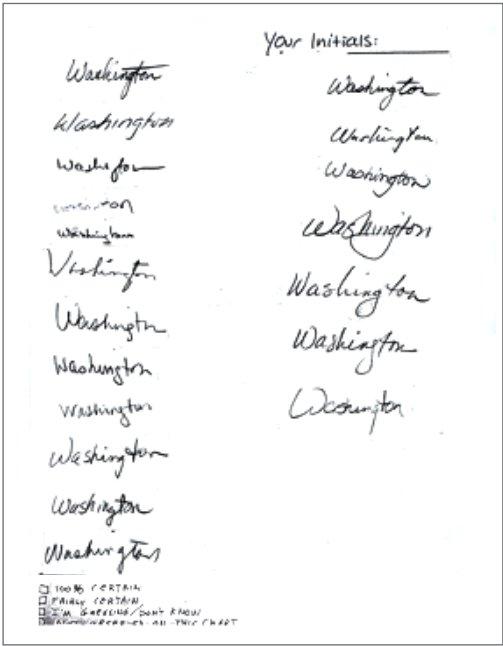
Using worksheets for self-authenticating

After collecting the entire group of index cards, I created a Master Set of six worksheets, and made 25 individual copies, one for each participant.

To further challenge their objectivity, I omitted various participants' handwriting on each worksheet. See Figure A: One of the six worksheets.

On the third day of our retreat, everyone was asked to identify, if observed, their own handwritten phrases on each page of their six worksheets. On the final retreat day, participants gathered to hear whether they had succeeded in identifying their own handwriting.

Figure A: One of the six worksheets.



Results

Success Rates

As a small population study, the prompts with words and word-number combinations averaged a 94.25% success rate in self-authenticating. The breakdown was as follows:

| | |
|-----------------|-----|
| Merry Christmas | 95% |
| Washington | 95% |
| April 15, 2007 | 95% |
| September | 92% |

In contrast, the prompts with numbers only averaged a 64.5% success rate in self-authenticating, with the following breakdown:

| | |
|----------|-----|
| 7 8 9 10 | 55% |
| 1948 | 74% |

̄ 94.25%

̄ 64.5%

Confidence Choices

Additionally, on each page, participants were asked to mark one of three confidence choice , which averaged as follows:

| | |
|-------------------------|-----|
| I'm 100% certain | 60% |
| I'm fairly certain | 32% |
| I'm guessing/don't know | 0% |



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Discussion and further thoughts

Following participants' attempts to identify their own handwriting and numerals, future studies would include asking them to reveal which features they relied upon in making their comparative determinations. Knowing which features were chosen might well become useful in the further study of handwriting and the challenges of self-authentication.

Further studies of this type could positively impact the forensic science community. Truth and justice may be served when a forensic document examiner expresses fact-based proof that is contrary to someone's subjective statement, "That's not my handwriting," or vice-versa.

Further expanding this study could illuminate the issue of eyewitness error when a subject denies, is unable, or mistakes the identification of his/her handwritten numbers in cases involving altered medical records, employment logs/timesheets, legal documents, and other questionable handwritten entries. Possessing these insights may become the basis of serving the truth when a subject cannot recall or is unable to accurately self-authenticate questioned entries.

Conclusion

The data from this study suggests that people are less able to identify their own handwritten numbers versus their handwritten words, which could be attributed to the limited amount of graphic movement activity for handwritten numbers as compared to handwritten words or phrases. The preliminary data from this small population study suggests additional research would be fruitful.

Bibliography on the next page.



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Continued from the previous page.

Bibliography

This bibliography of selected articles and books is suggested for more in-depth study for those wishing to pursue the matter more fully.

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